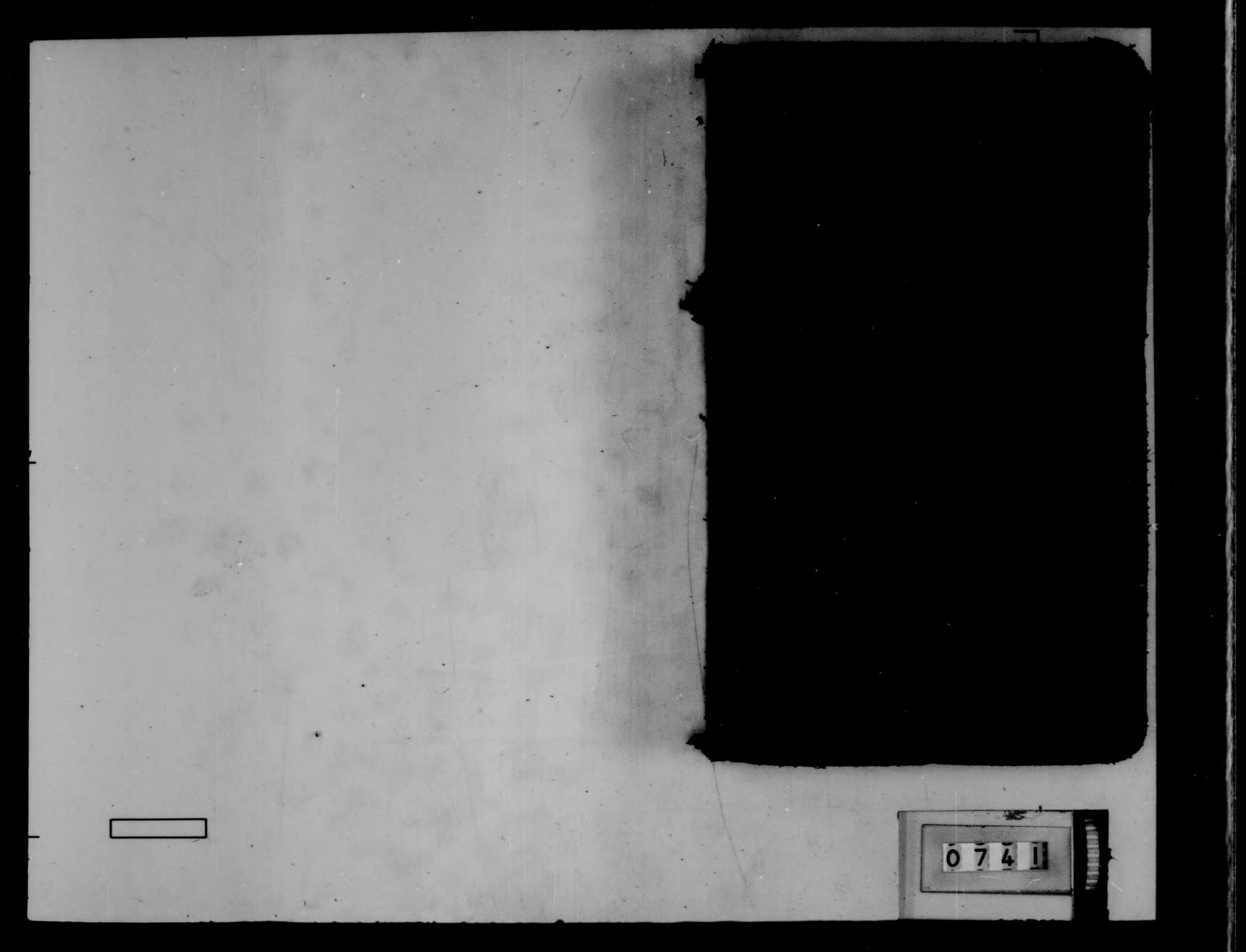

0741

EUGENE DIETZGEN CO.

Drawing Materials and Surveying Instruments.

NEW YORK. CHICAGO. SAN FRANCISCO

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING

ROADWAY 20 FEET WIDE. SIDE SLOPES 1 TO 1.

FOR SINGLE TRACK EXCAVATION.

"Copyright, 1902, by Eugene Dietzgen Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	10.0	10.1	10.2	10.3	10.4	10 5	10.6	10.7	10.8	10.9	0
1	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11 7	11.8	11.9	1
2	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	2
3	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	3
4	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	4
5	15.0	15.1	15 2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	5
6	16.0	16.1	16 2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	6
7	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	7
8	18.0	18.1	18.2	18.3	18 4	18.5	18.6	18.7	18.8	18.9	8
9	19 0	19 1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	9
10	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	10
11	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	11
12	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	12
13	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	13
14	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	14
15	25.0	25.1	25 2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	15
16	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26 8	26.9	16
17	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	17
18	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	18
19	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	19
20	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	20
21	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	21
22	32.0	32.1	32.2	32 3	32.4	32.5	32.6	32.7	32.8	32.9	22
23	33.0	33.1	33.2	33.3	33.4	33.5	33 6	33.7	33.8	33.9	23
24	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34 9	24
25	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	25
26	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36 7	36.8	36.9	26
27	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37 8	37.9	27
28	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38 7	38.8	38 9	28
29	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39 9	29
30	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	30
31	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	31
32	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	32
33	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	33
34	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	34
35	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	35
36	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	36
37	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	37
38	48.0	48 1	48 2	48.3	48.4	48.5	48 6	48.7	48 8	48.9	38
39	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49 7	49.8	49 9	39
40	50.0	50.1	50.2	50.3	50 4	50.5	50.6	50.7	50.8	50.9	40

Calculated by F. E. Paradis, C. E.

1163+89
69 5
1164.58 5

1184 1 41 60
8 1 8
1185 73.44

50371 50371

0 7 4 2

"D" Line.

Preliminary Line Book of Reclamation Dist N° 551
Oct 17th 1906

743

742

742 on top of hill

741

740

739

738

"D" 737+44.8 =

"E" 737+48.2 BC T½

D

E

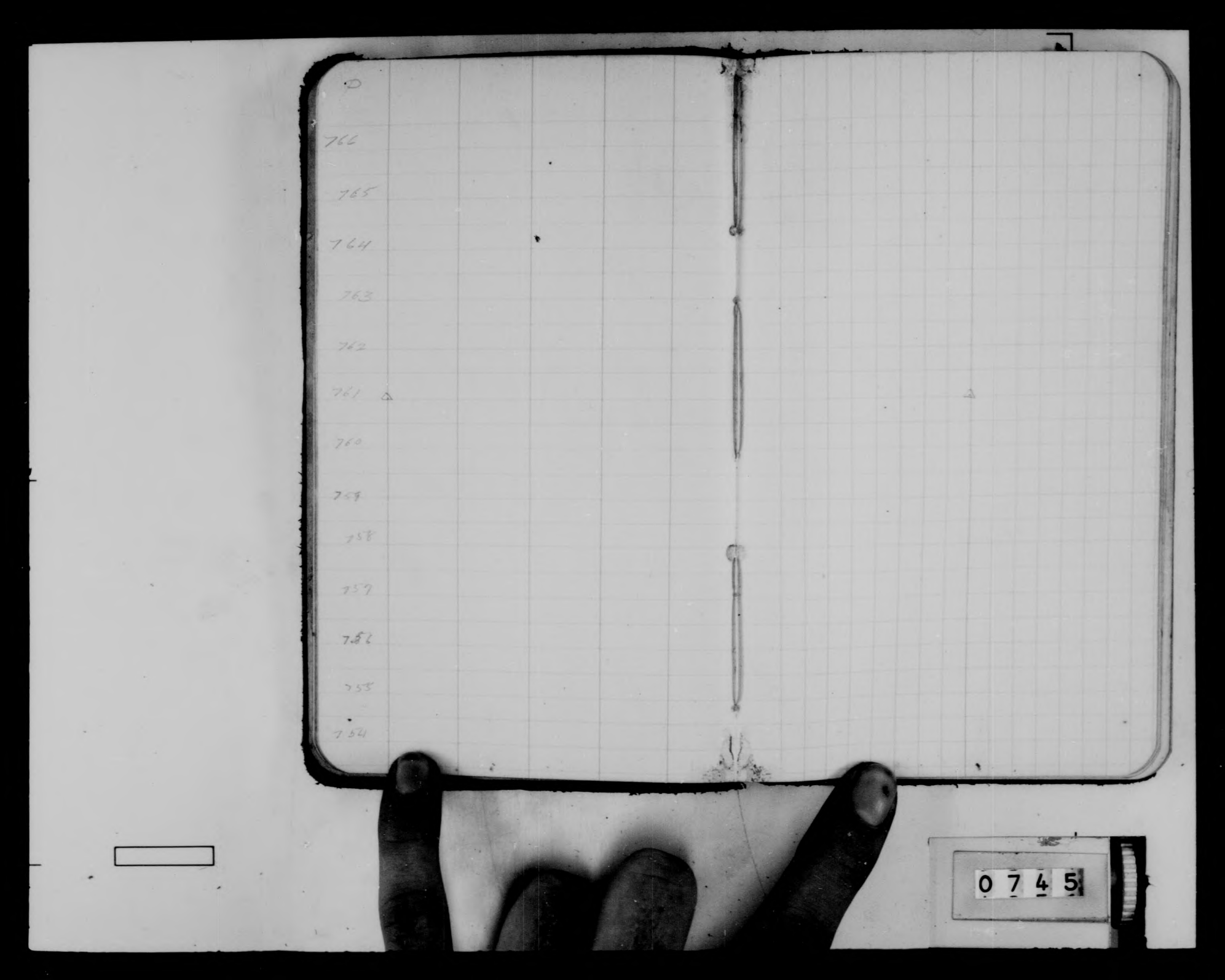
0743

"D"

Station	Angle R	Angle L	Mag bear	Cor Course
753				
752				
751				
750				
749				
748				
747				
746				
1343	Fence			
745				
744				
743+56		6° 57'	S 23° 05' E	

+56 on S side road by Level

0744


766
765
764
763
762
761
760
759
758
757
756
755
754
0745

P

778

Edge small ditch

777

776

775

774

773

772

771 Δ

69 cr Road

770

41c Fence

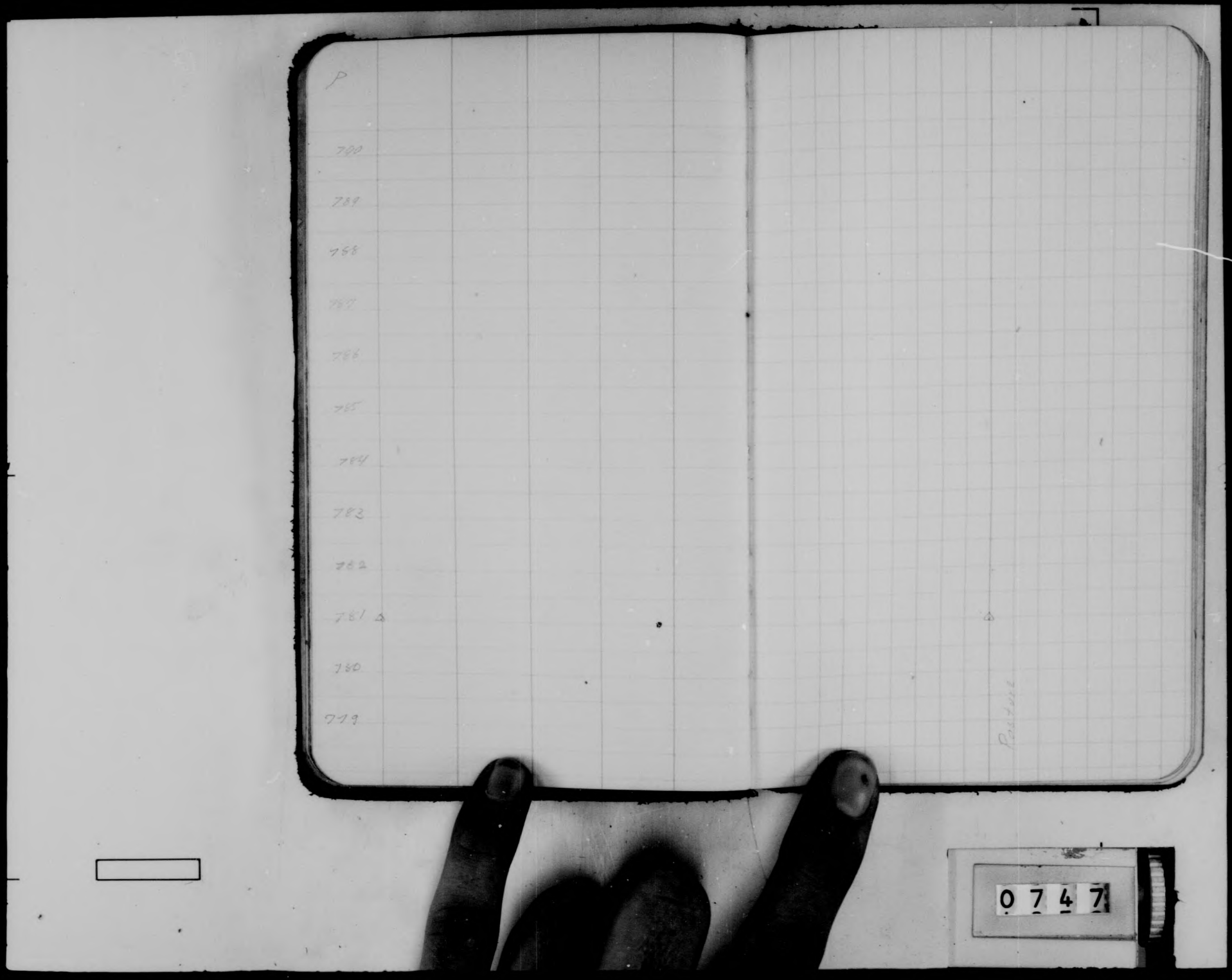
769

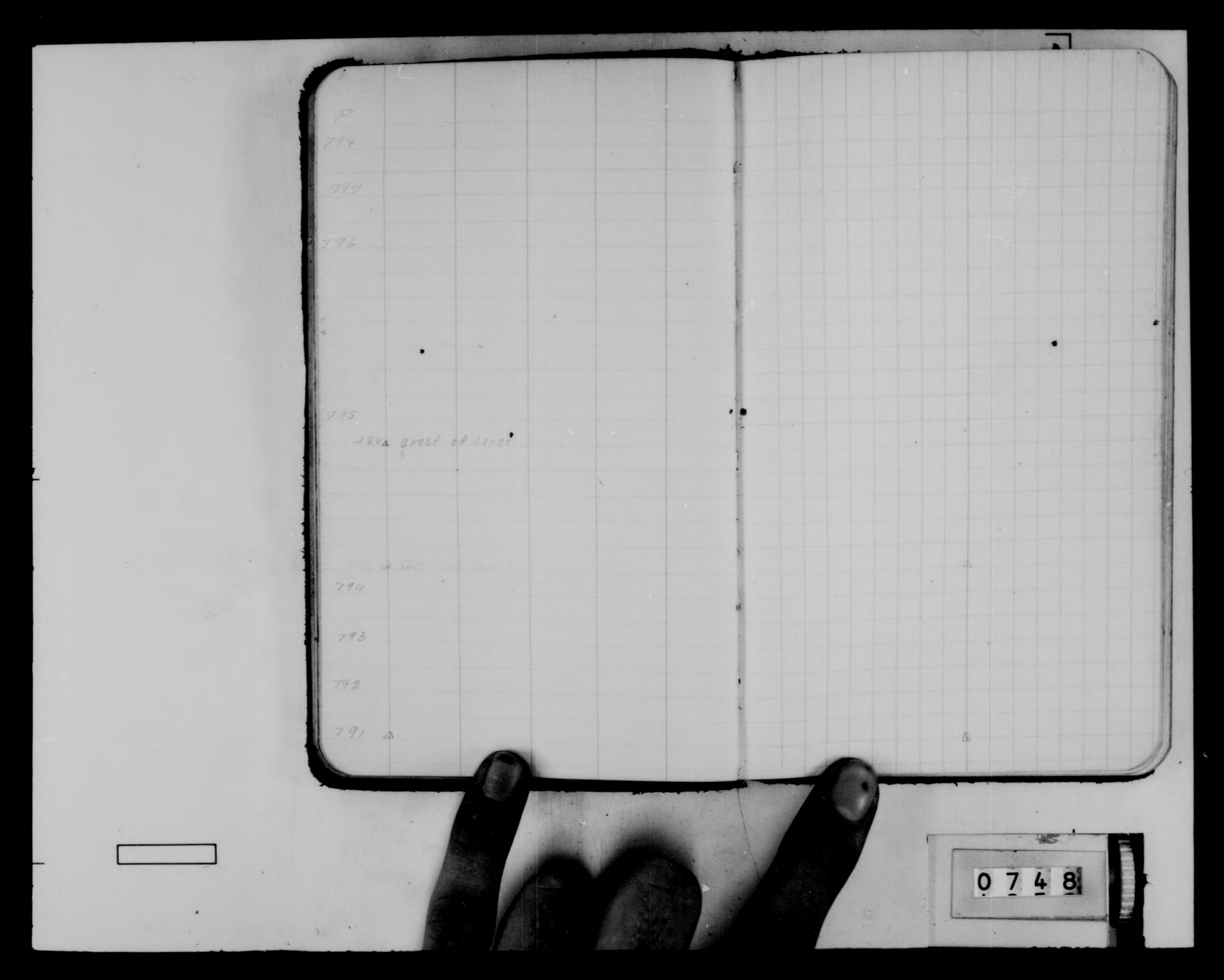
768

767

Private road

0746


P
790
789
788
787
786
785
784
783
782
781
780
779
0747


796
795
1884 Crest of Level
794
793
792
791
0748

P

811

810

809

808

807

806

805 △ Lt to county road bridge 25°29' Rt to pumphouse stack 10° 02' Rt

804

803

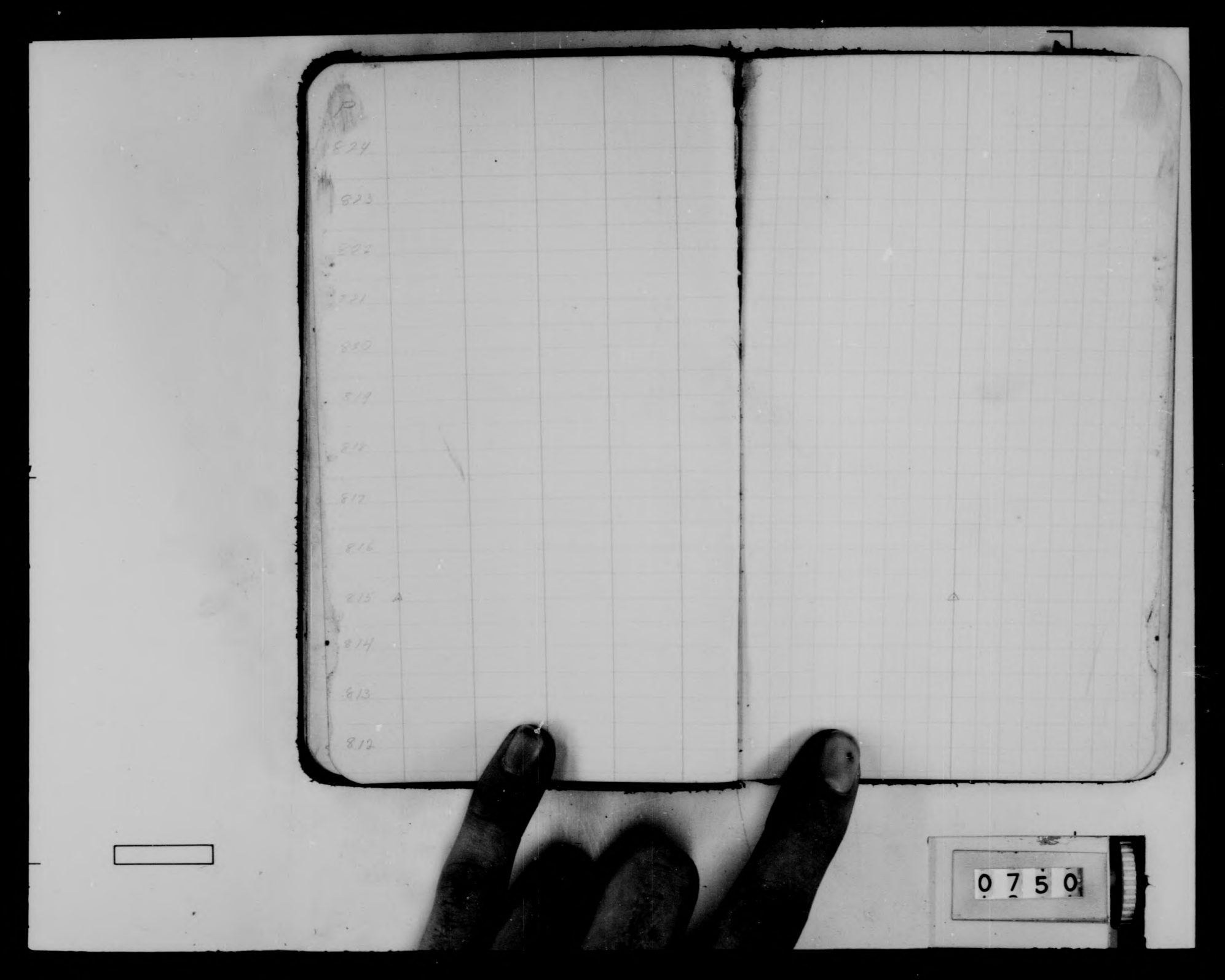
802

801

800

799

0749


824
823
822
821
820
819
818
817
816
815
814
813
812
0750

P

Sta	Dist	Angle R	Angle L	Magnetic

Broke line through tube swamp and set plugs to plug line through. line produced to county road but not chained. Hub set on N side of county road to turn angles on bridges Angles and distances to bridges given below.

To bridge over dredger cut

11584.5 96° 35' S71° 30' W

To bridge over drainage Canal

1012' 81° 54' N73° 00' E

To bridge over arm of slough

1539' 82° 20' N73° 30' E

To Pierson District Pump house

29° set ~~0 0 0~~ 00° 0'

825 △ S25° 05' E

Oct 18th Oct 19th Oct 20th

Dist to Center bridge 147' long

Dist to near end bridge 53' long

Dist to near end bridge 94' long

Angle taken to chimney of pump house Oct 22

Point near edge of Tule △

0751

P

Oct 24

837

105 water edge

836

835

834

833

832

831

830

829

828

827

826

825

Water

Low tide

Water depth about 2' to 3' Oct 24 1918

Stakes set in water about 2 feet apart

water surface

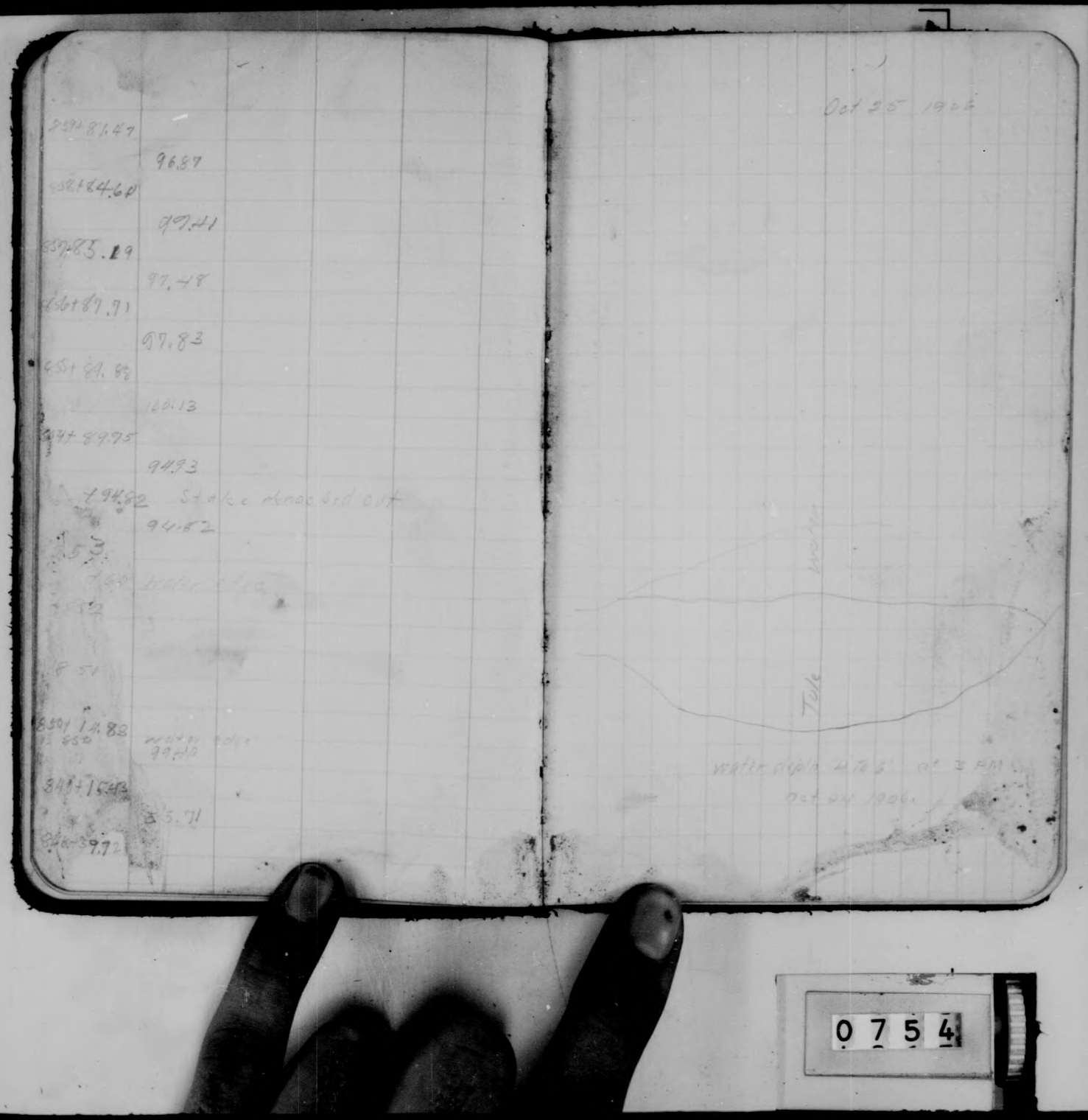
Tule

Edge of Tule

0752

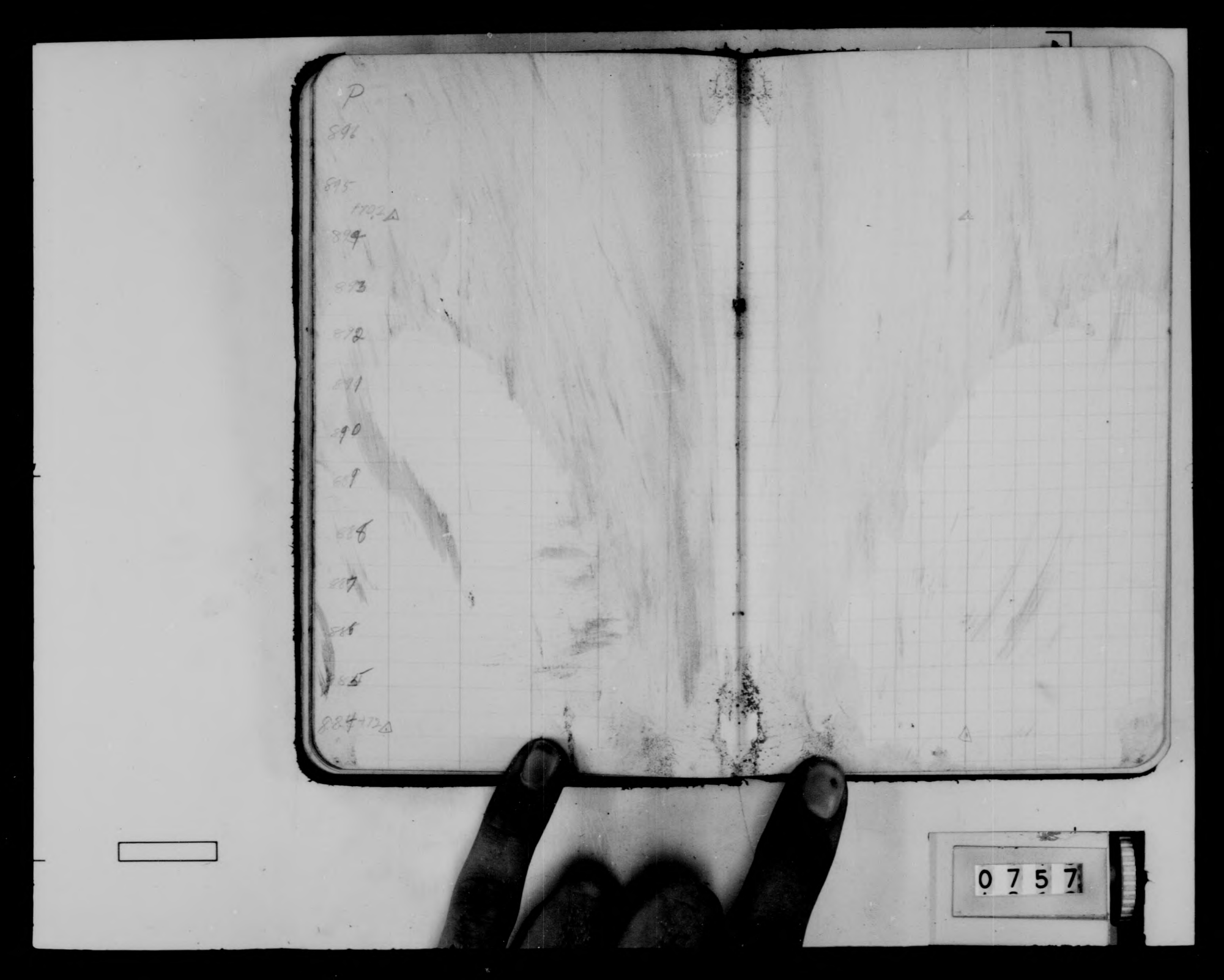
Bsta
Dist
84.74
81.79
83.09
61.64
61.55
72.57
95.85
95.24
water edge
+00.5
water
Tule
water

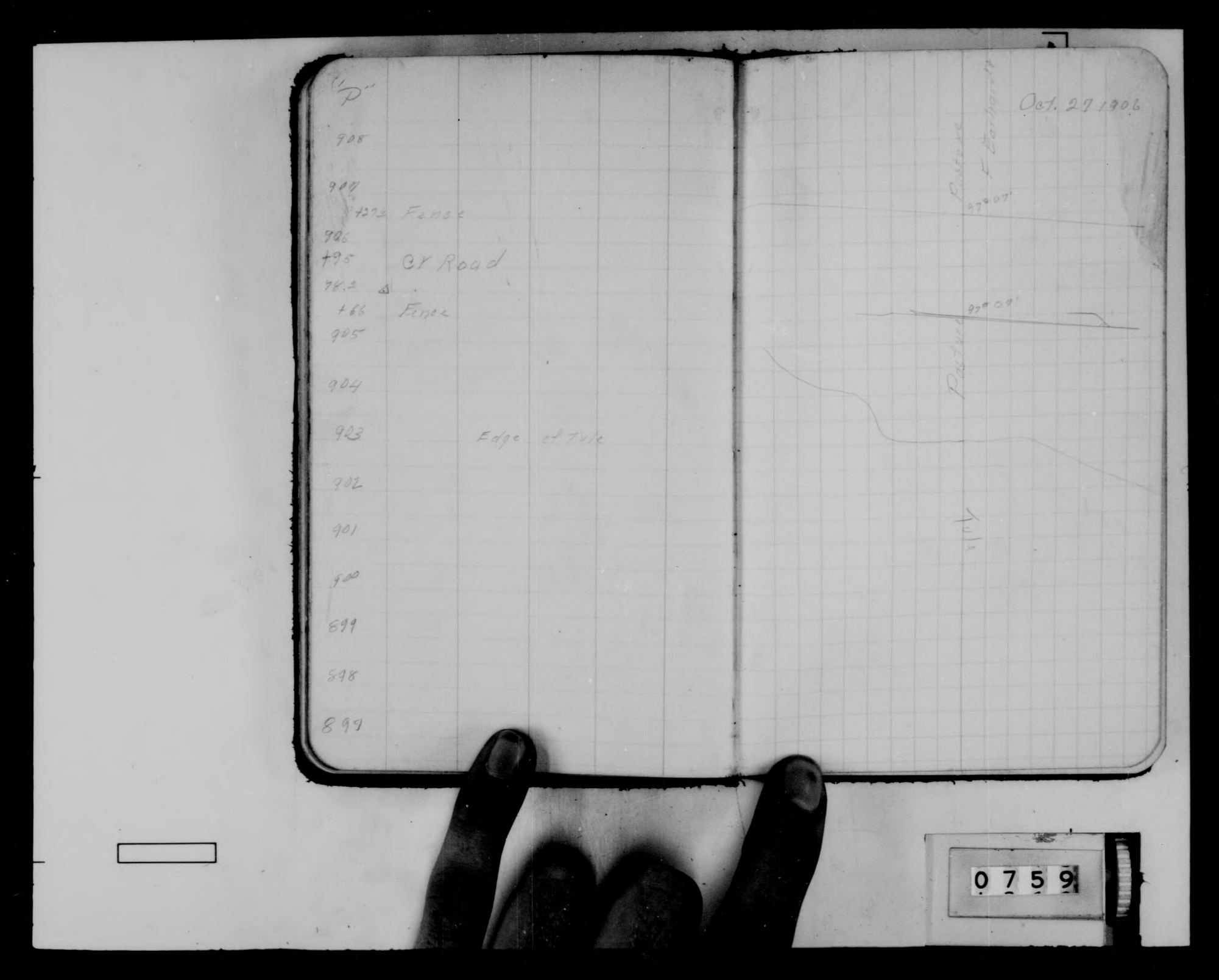
0753

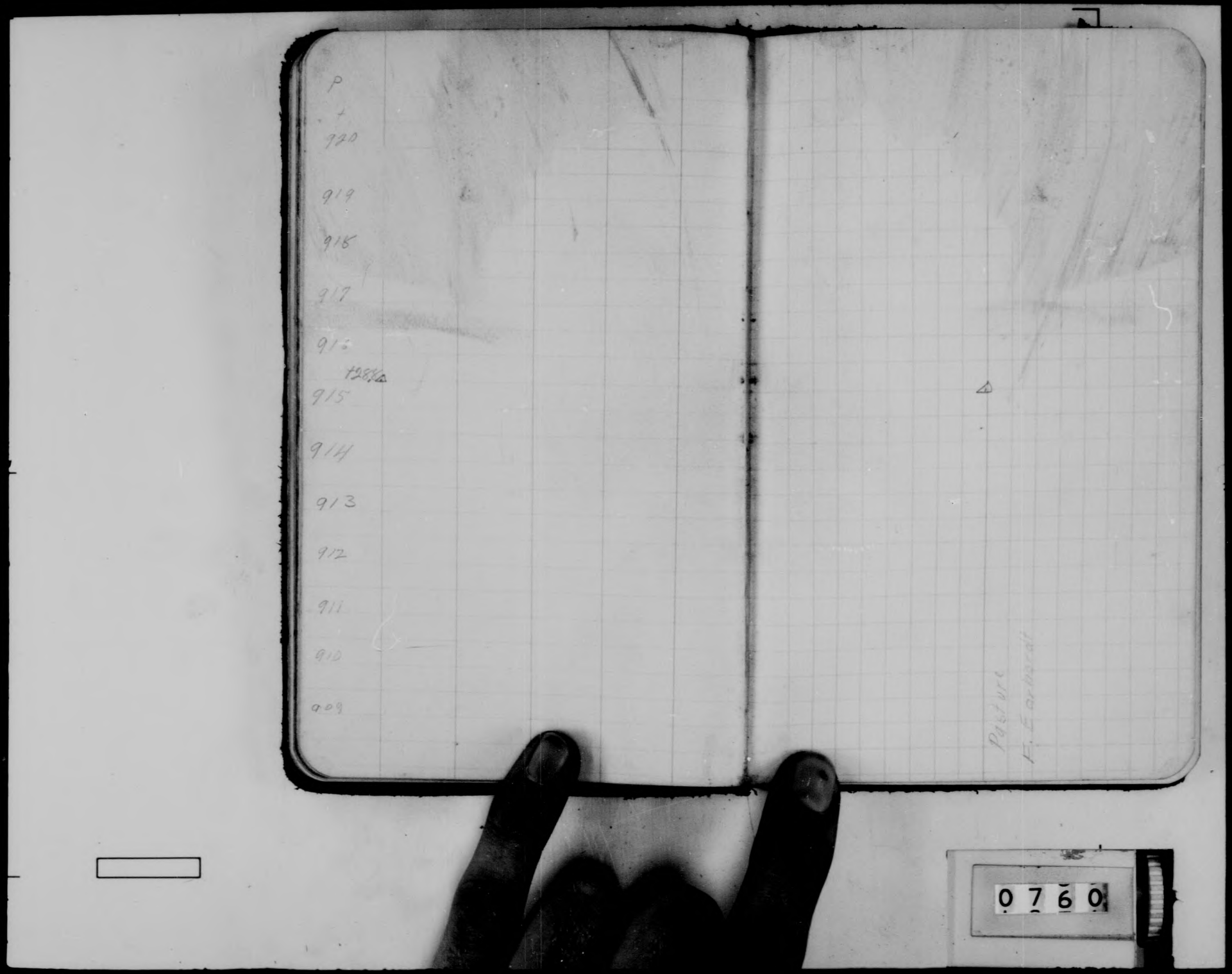

Oct 26 1904
96.87
97.41
97.48
97.83
100.13
94.93
94.82
Stake knocked out
94.82
water
Tule
water edge
99.40
water edge at 3 PM
Oct 24 1904.
9.72
0754

8733633
8711439.31
8701648.81
8699655.51
8688167.76
8677671.58
8605
8665
8664
8663
8662
8661
8660.81
8659.81.47
Edge of Tule
Tule
Weeds
0755

Title
water
needs
0756


P
896
895
894+12
899
893
892
891
890
889
888
887
886
885
884+12
0757


"P"
908
907
+27.2 Fence
906
+95 Cr Road
78.2
+66 Fence
905
904
903 Edge of Tule
902
901
900
899
898
897
Oct. 27 1906
Pasture
97°07'
97°09'
Pasture
Tule
0759


P
920
919
918
917
916
915
914
913
912
911
910
909
0760

285 + 2 Top of Levee Angle to right sta. of S and Pierson Levee 97° 12' R 1° 54'

930 bank of old canal S. side

50 bank of old canal N side

929

928

924

926

925

924

923

922

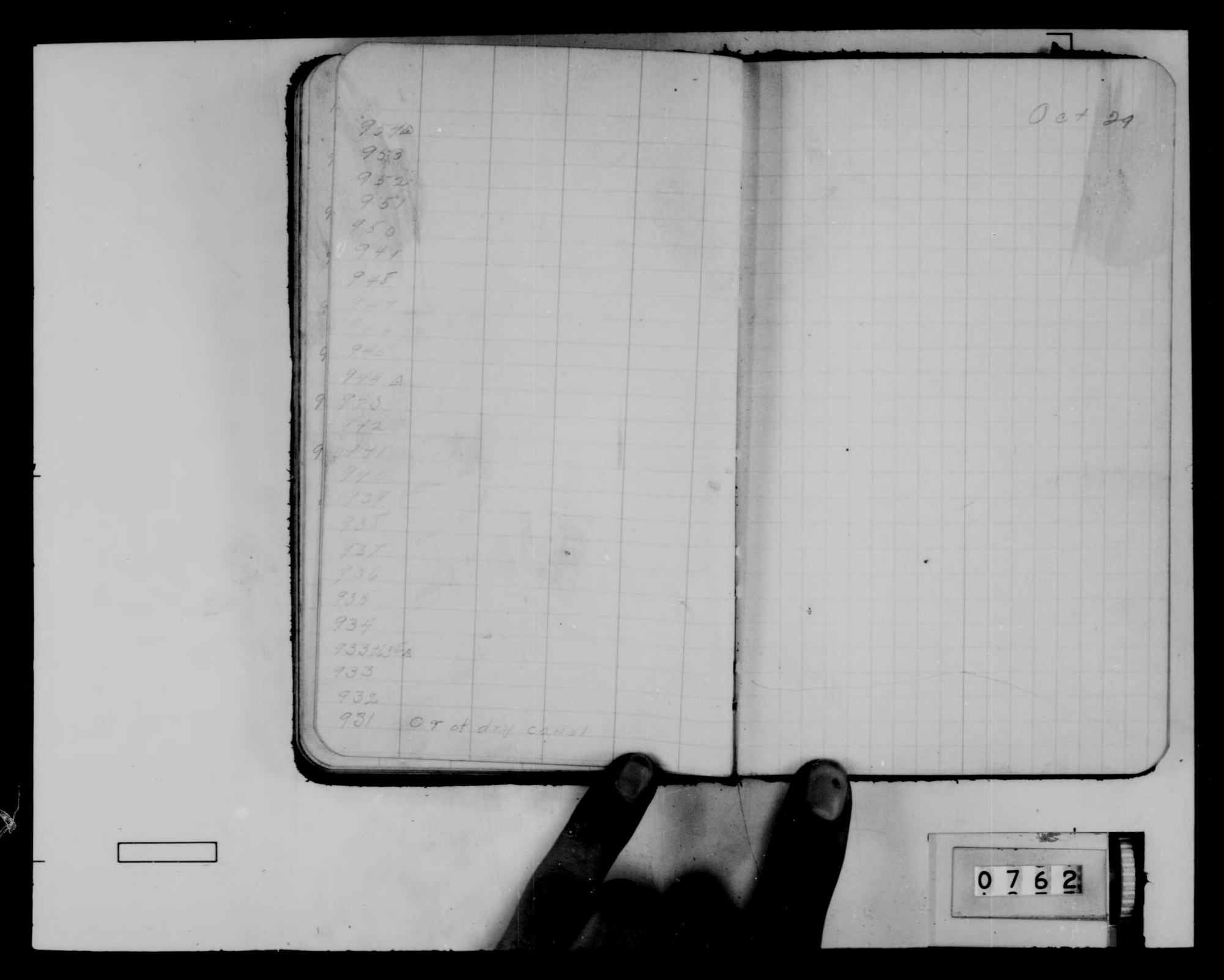
+23.43

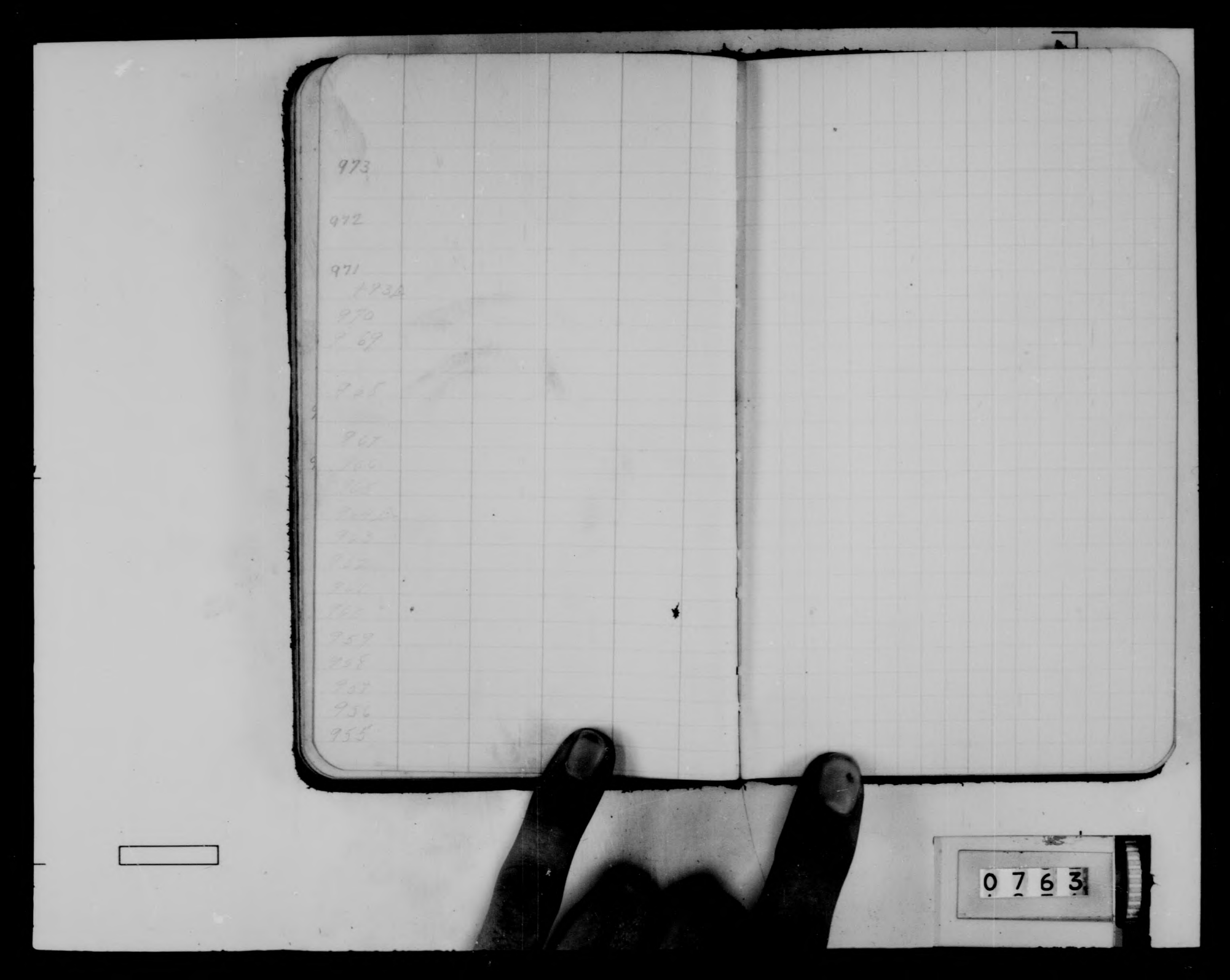
921 or drainage Canal no sta

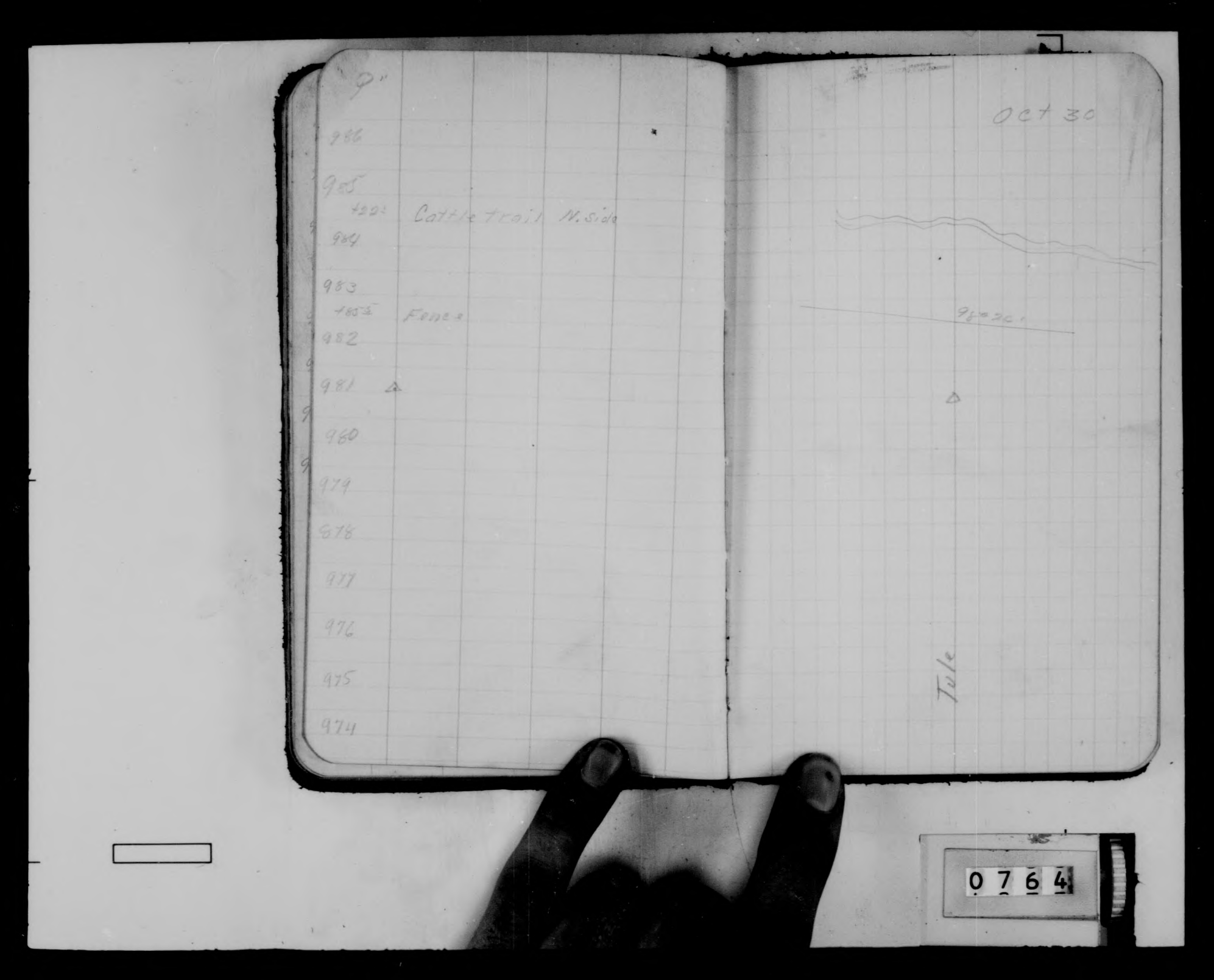
+66½ bank of drainage Canal

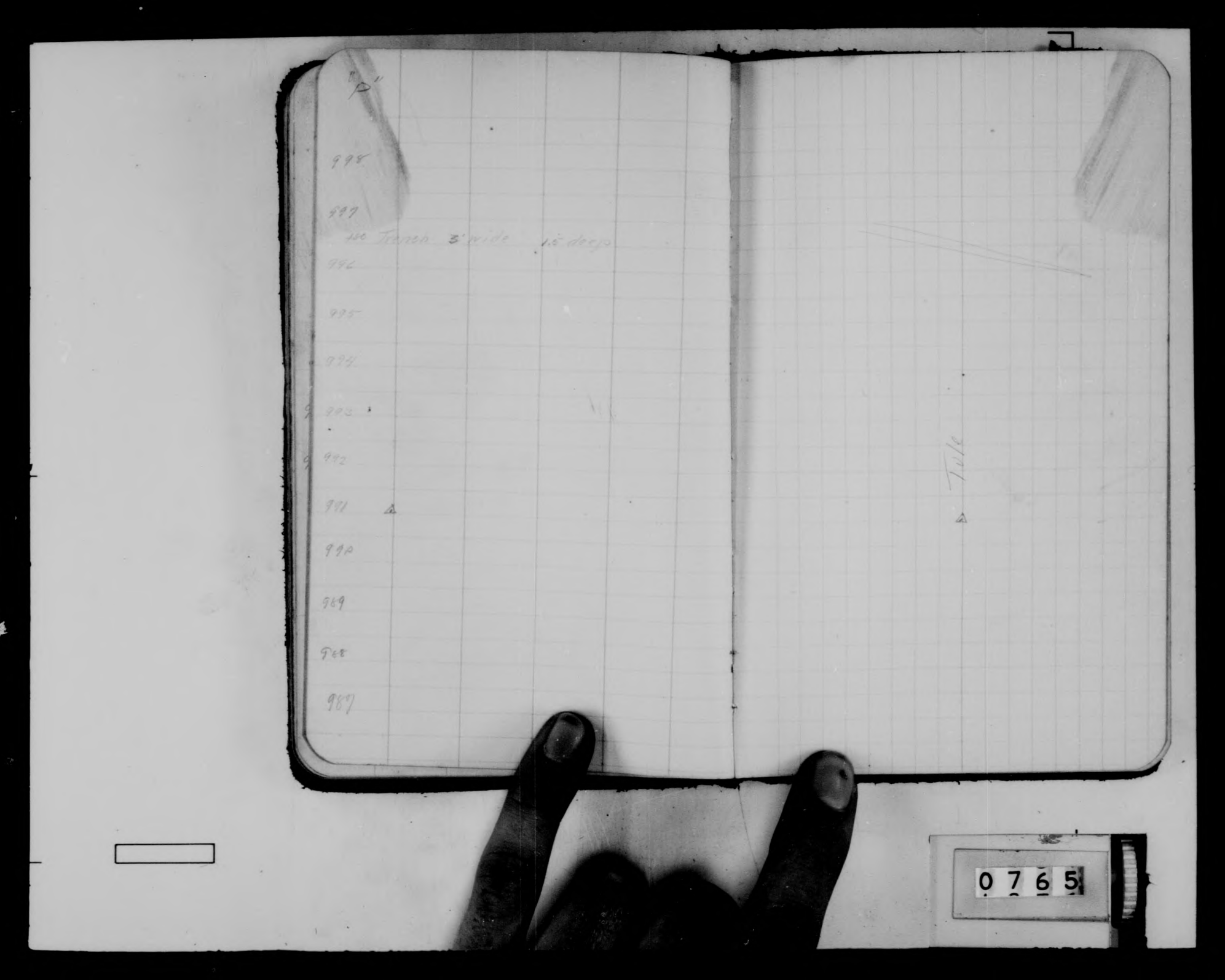
Drainage Canal 36+46'

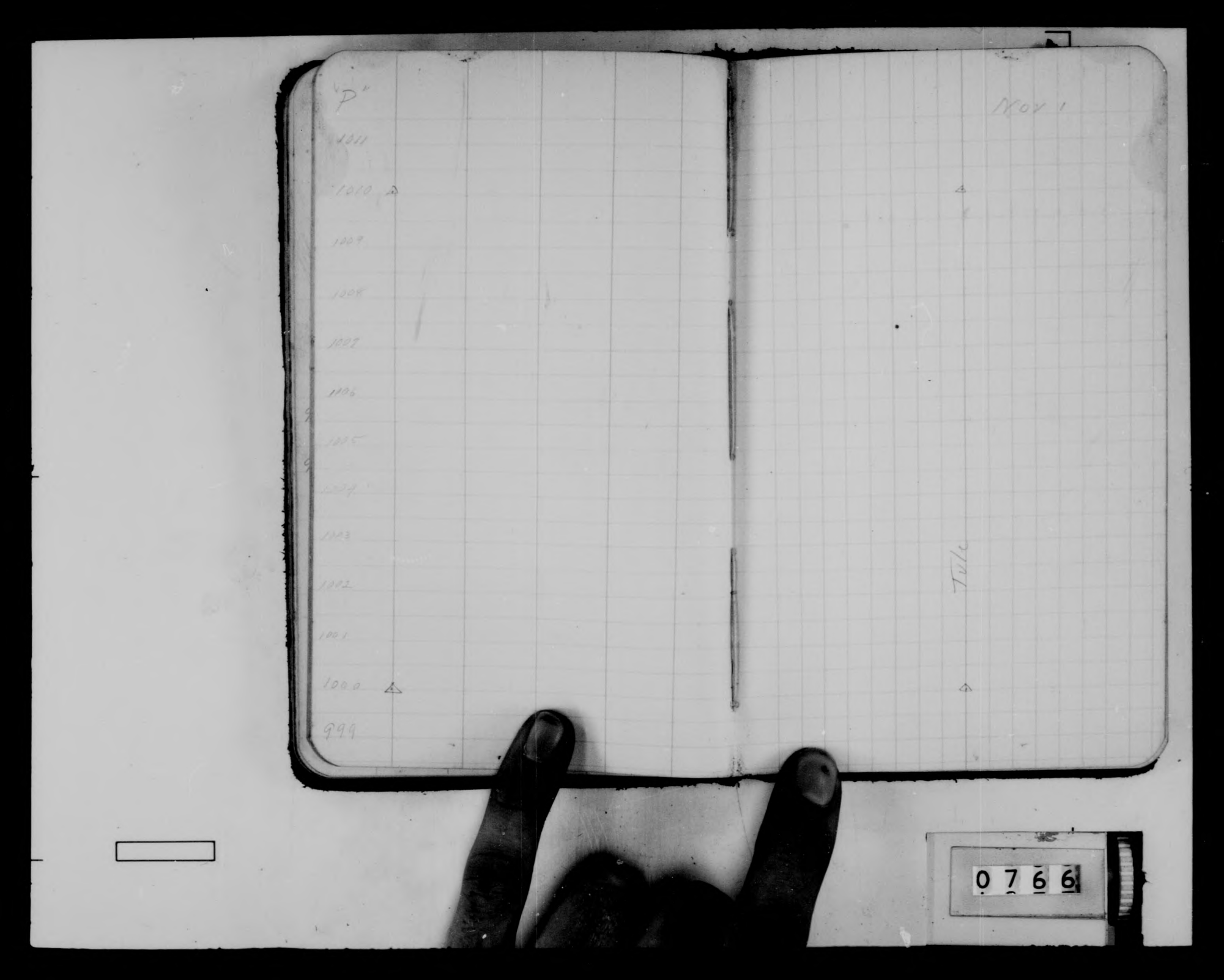
0761

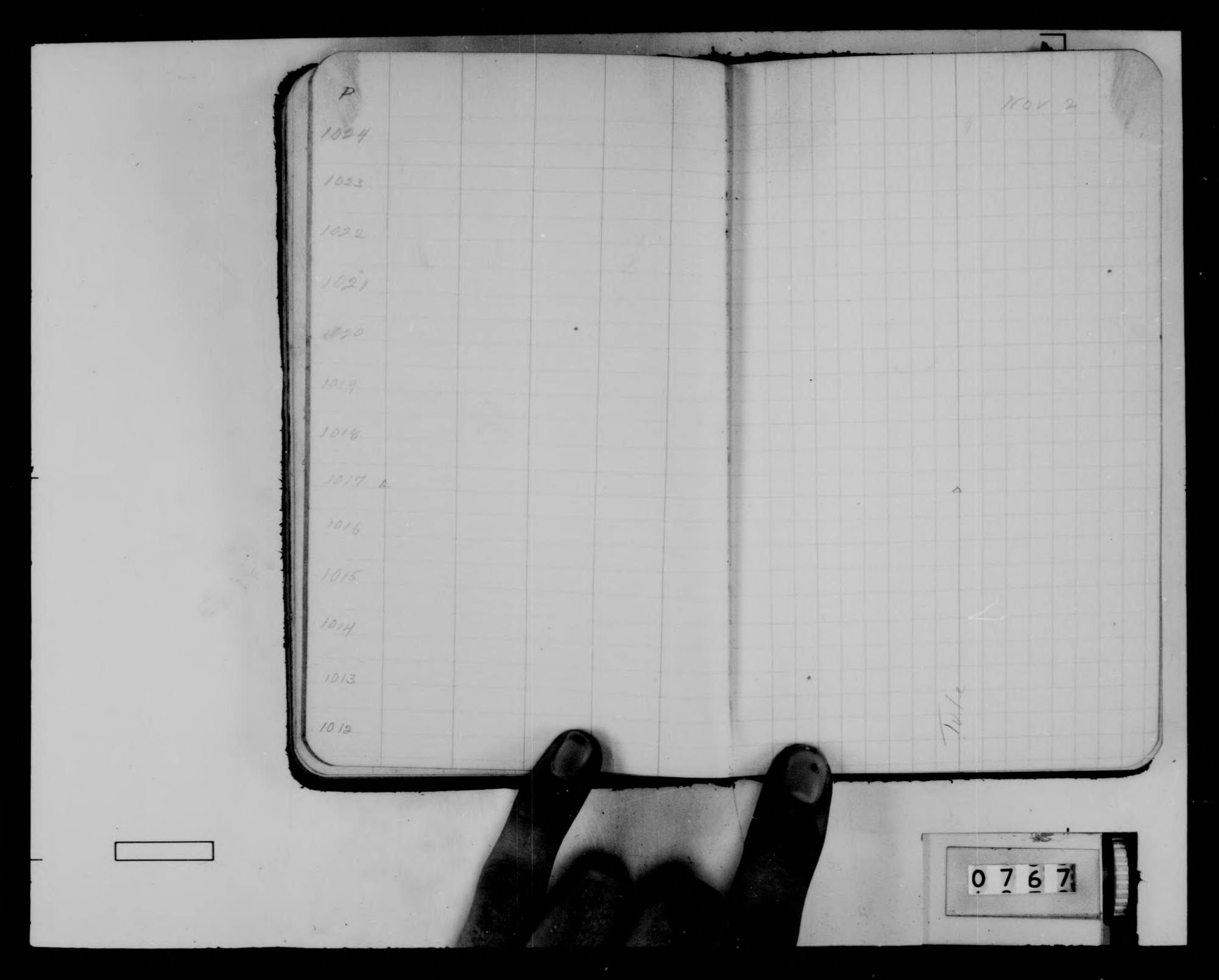

Oct 29
952½
953
952½
951
950
949
948
947
946
944 A
943
942
941
940
939
938
937
936
935
934
933½934½
933
932
931
Cr of dry canal
0762

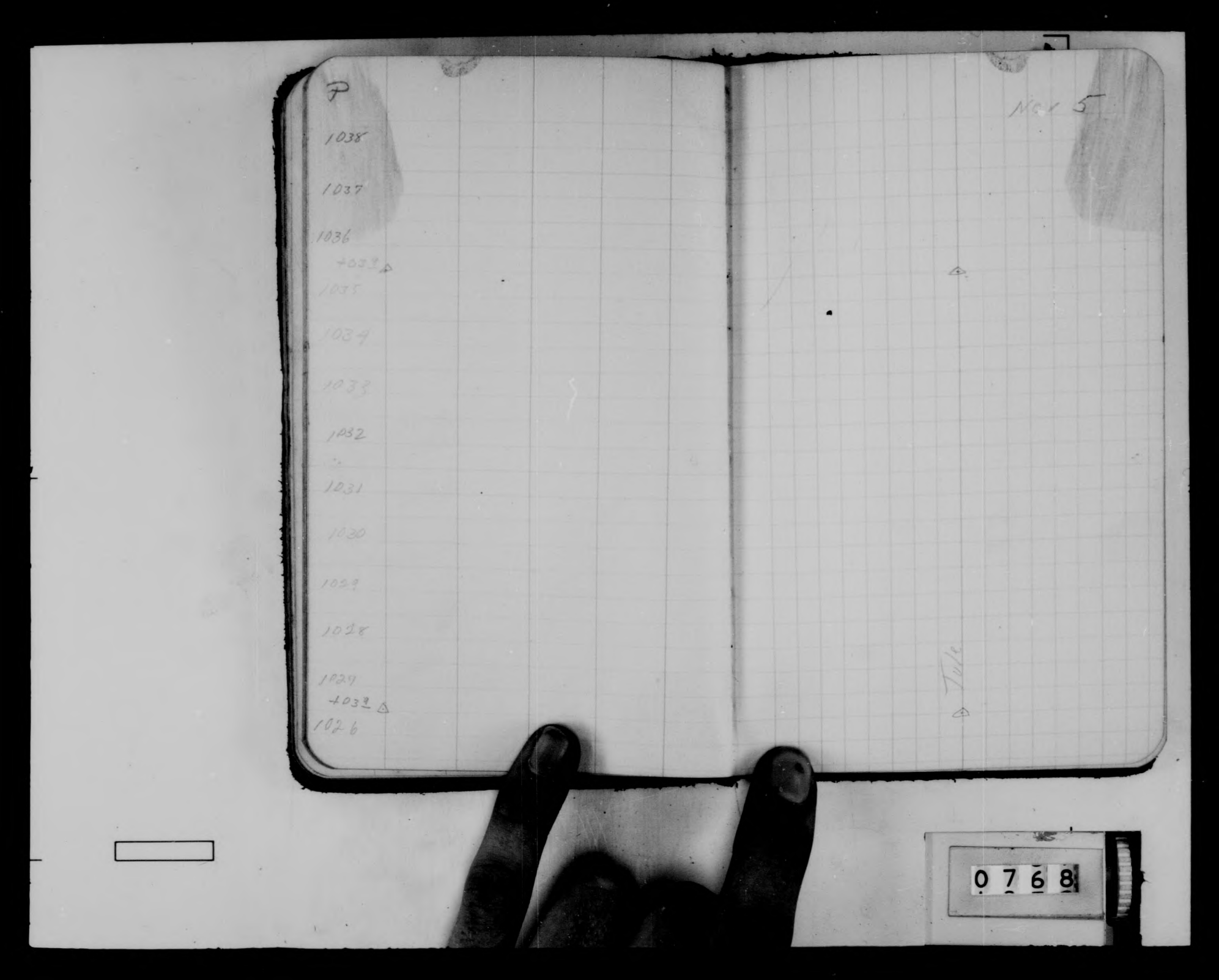

973
972
971
970
969
968
967
966
965
964
963
962
961
960
959
958
957
956
955
0763

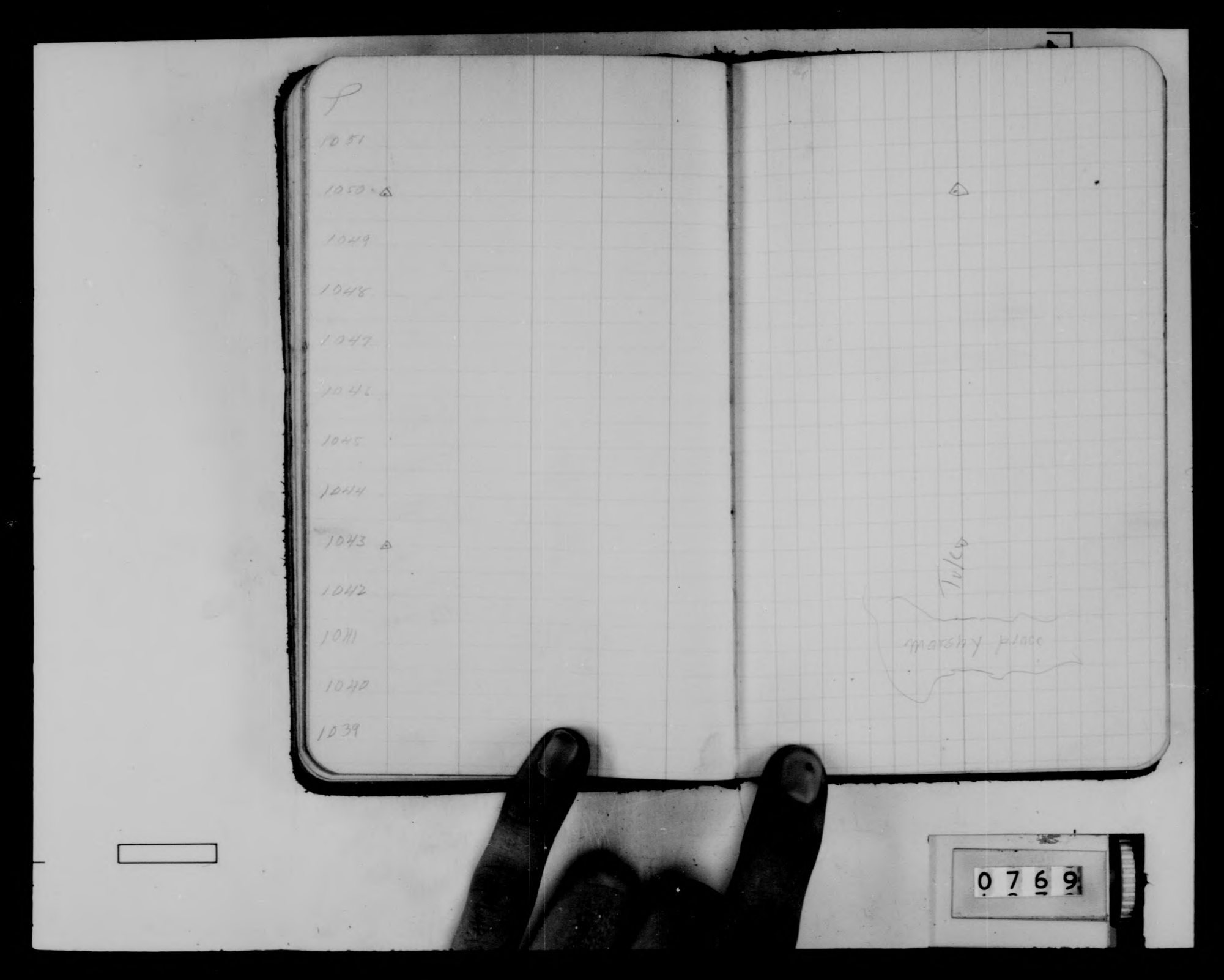

9"
986
985
+22=
Cattle trail N. side
984
983
+60=
Fence
982
981
980
979
978
977
976
975
974
Oct 30
98°2C.
Tule
0764


998
997
Trench 3' wide 1.6' deep
996
995
994
993
992
991
990
989
988
987
Tule
0765


"P"
1011
1010
1009
1008
1007
1006
1005
1004
1003
1002
1001
1000
999
Nov 1
Tule
0766


P
1024
1023
1022
1021
1020
1019
1018
1017
1016
1015
1014
1013
1012
Nov 2
0767


P
1038
1037
1036
+033
1035
1034
1033
1032
1031
1030
1029
1028
1027
+032
1026
Nov 5
Tule
0768


1051
1050
1049
1048
1047
1046
1045
1044
1043
1042
1041
1040
1039
Tulc
marshy place
0769

P

1064

1063

1062

1061

1060

1059

1058

1057 △

1056

1055

1054

1053

1052

Nov 12 1906

Nov 6 to Nov 11 booked in Line
Sheet E 1420+45 EC.

← 120'

Tule

P'
1073
1072
1071
1070
+75
1069
1068
1067
1066
+98
slough
+80
1065
+53
swale
100'
Slough
Snodgrass slough

P

1086

1085

1084

1083

1082

1081

1080

1079

1078

1077

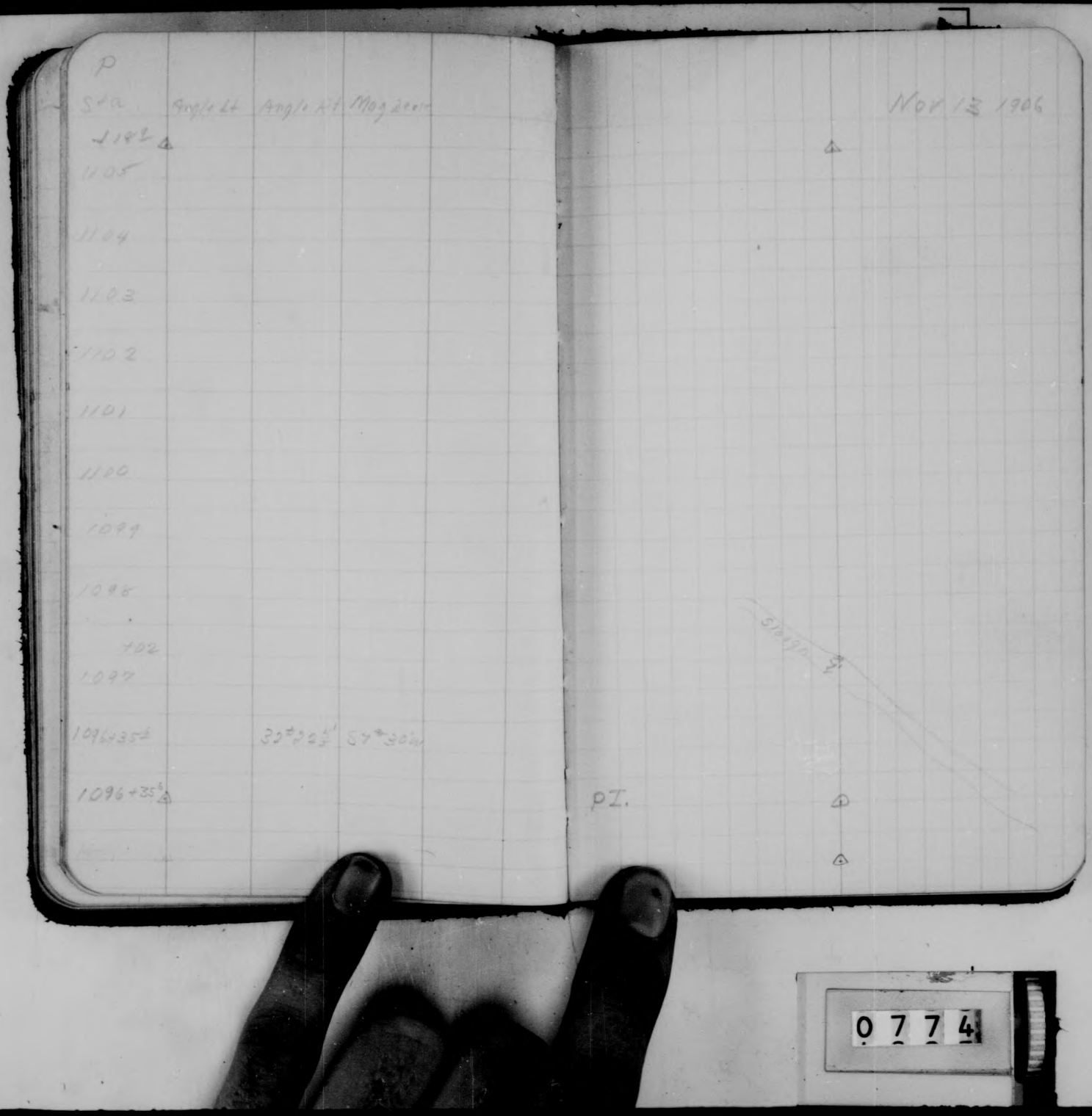
1076

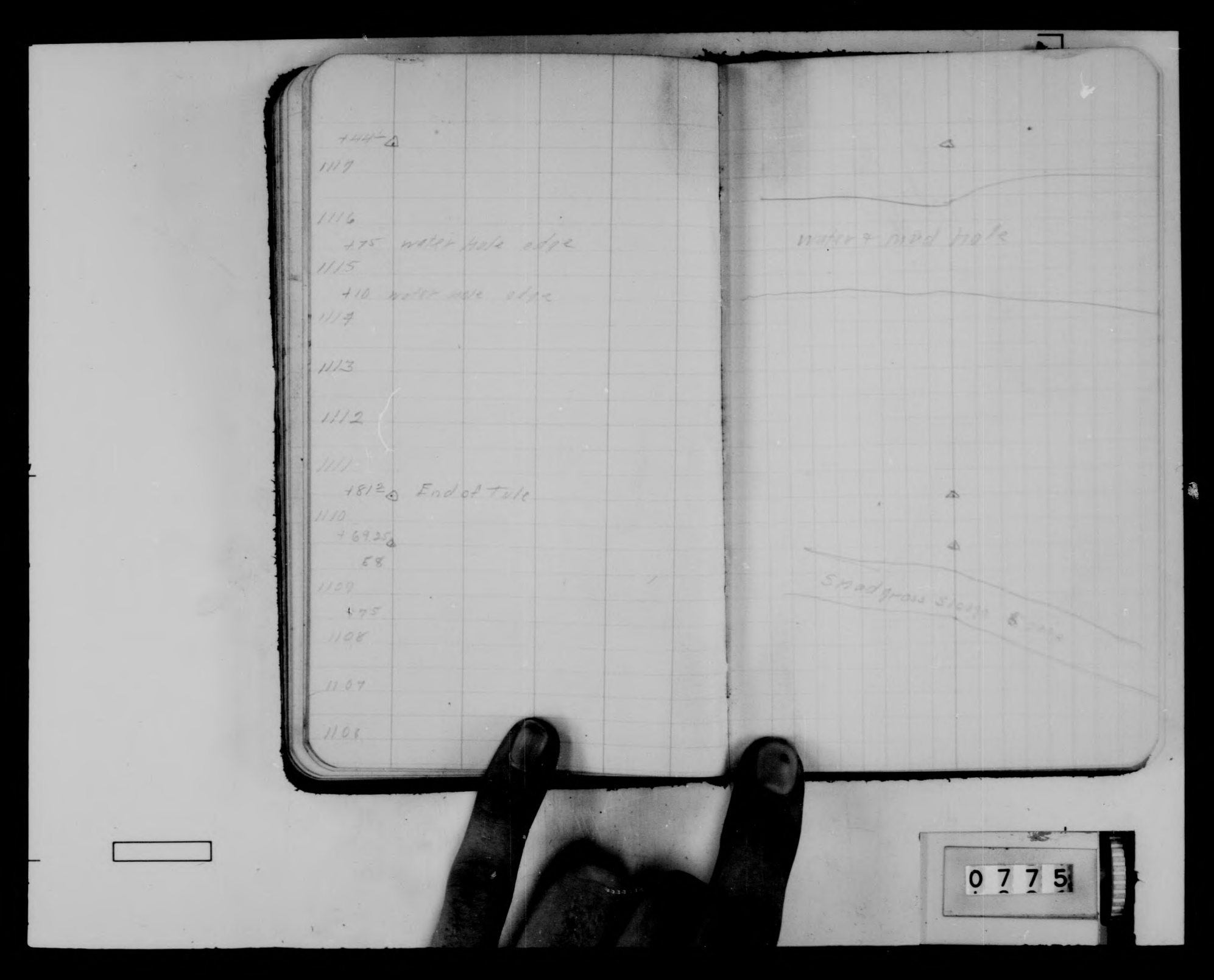
1075

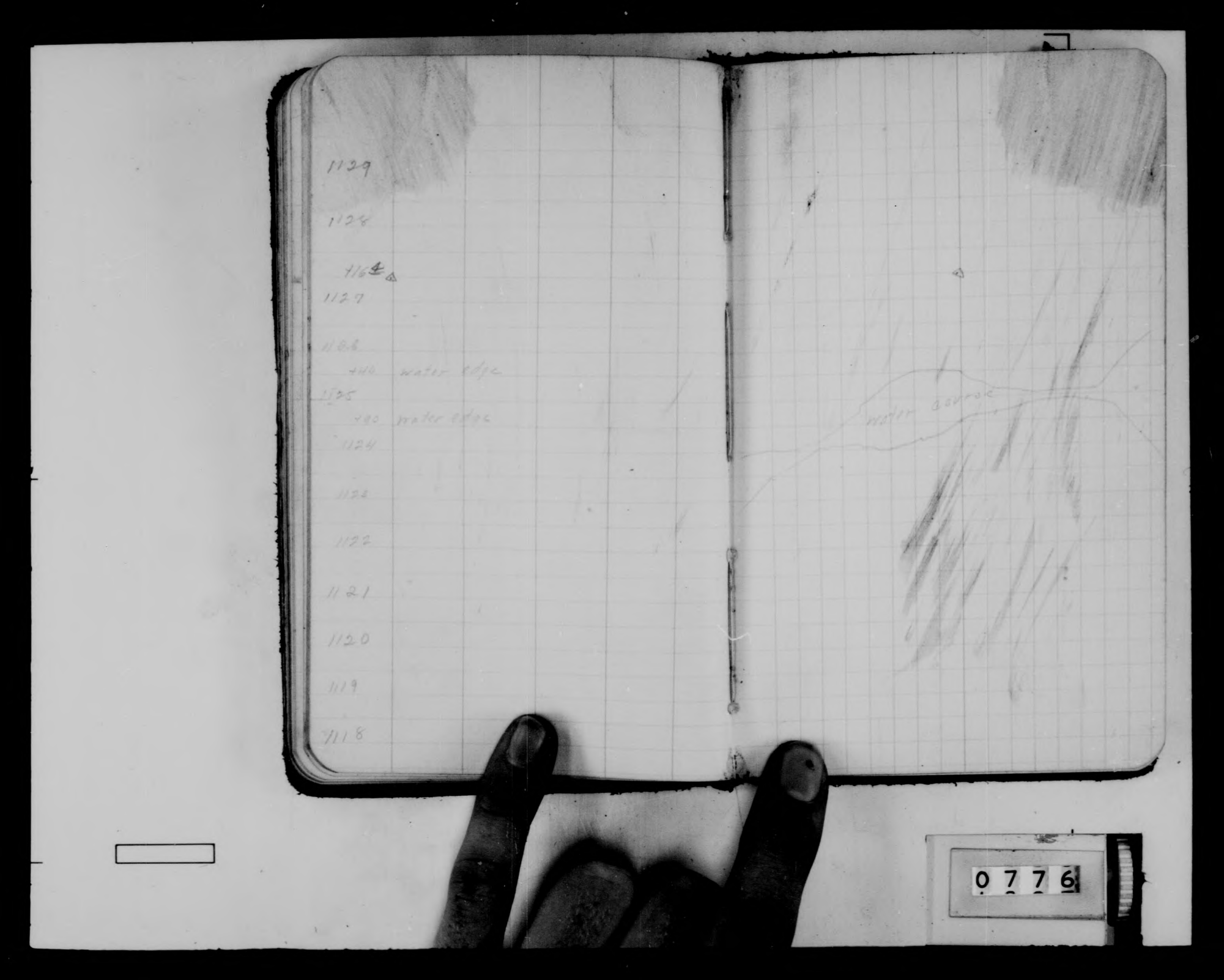
1074

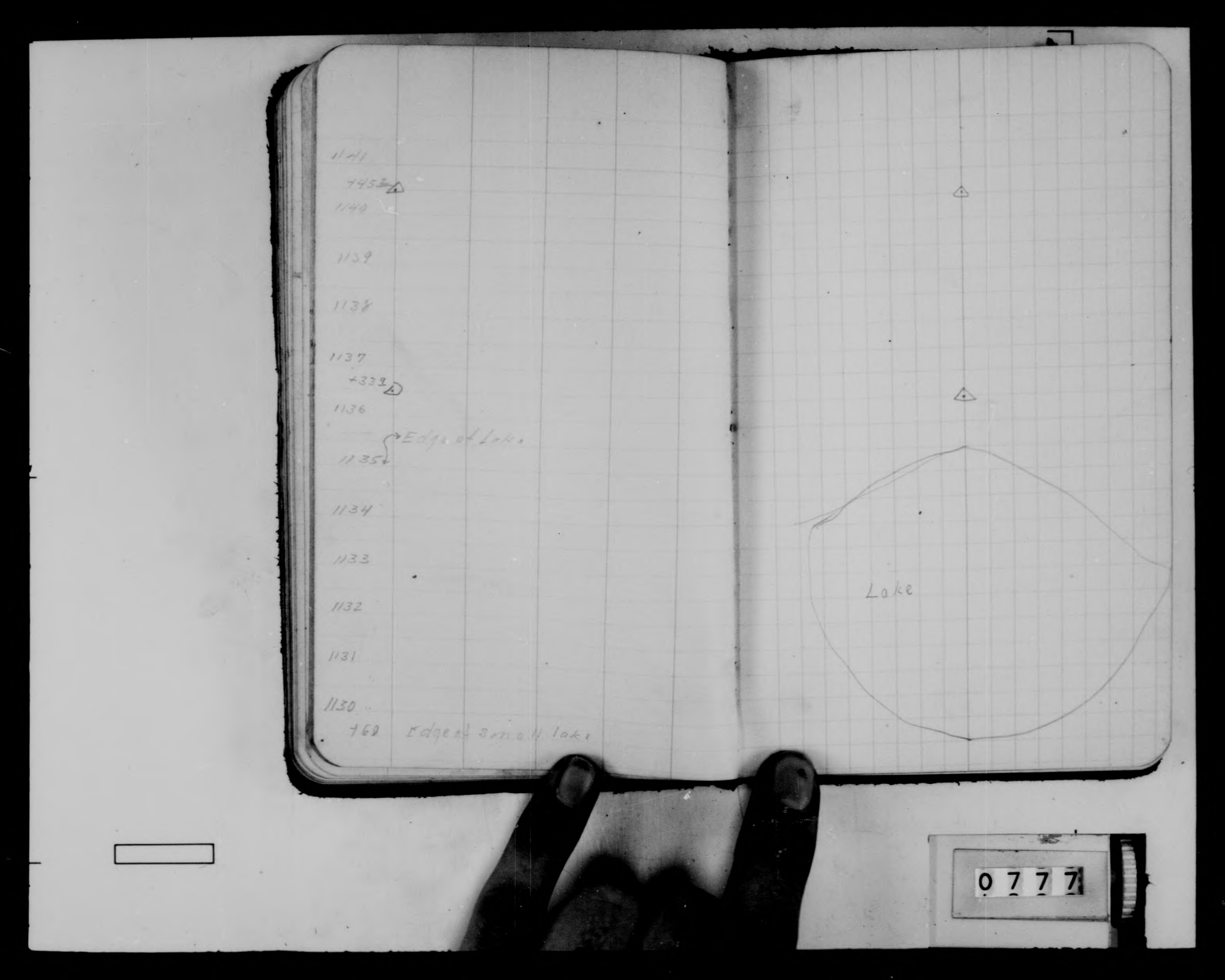
0772

1096
1095
1094
1093
1092
1091
1090
1089
1088
1087
< 50' >
Slough
Smallgrass Island
30' to 70' Bluff


P
Sta.
Angle Lt
Angle Rt
Magnetic
Nov 12 1906
1102
1101
1100
1099
1098
102
1097
1096+35.6
30°22½'
87°30½'
1096+35.6
P.I.
0774


+44+
1119
1116
+75 water hole edge
1115
+10 water hole edge
1114
1113
1112
1111
+81.2 End of Tule
1110
+69.25
58
1109
+75
1108
1107
1106
water & mud hole
Sea dgrass Slough & Tule
0775


1129
1128
1127
1126
+40 water edge
1125
+80 water edge
1124
1123
1122
1121
1120
1119
1118
water source
0776


1141
+453
1140
1139
1138
1137
+333
1136
Edge of Lake
1135
1134
1133
1132
1131
1130
+60 Edge of small lake
Lake
0777

P

Nov. 14 1946

1150

1152

1965 Δ

713 water edge

1151

1150 water edge

1149

1148

1149 water edge

1146

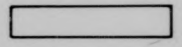
1145

1144

1140 water edge

1143

1142



0778

P

1166

1165

+58 5/

1164

1163

1162

1161

1160

+395

1159

1158

1157

+911 E

1156

1155

1154

Water hole

Lake Bed Terr

0779

P

1177

+69 Finer

1176

1175

1174

1173

1172

+69.5 Finer

+69.5

+38 Finer

1171

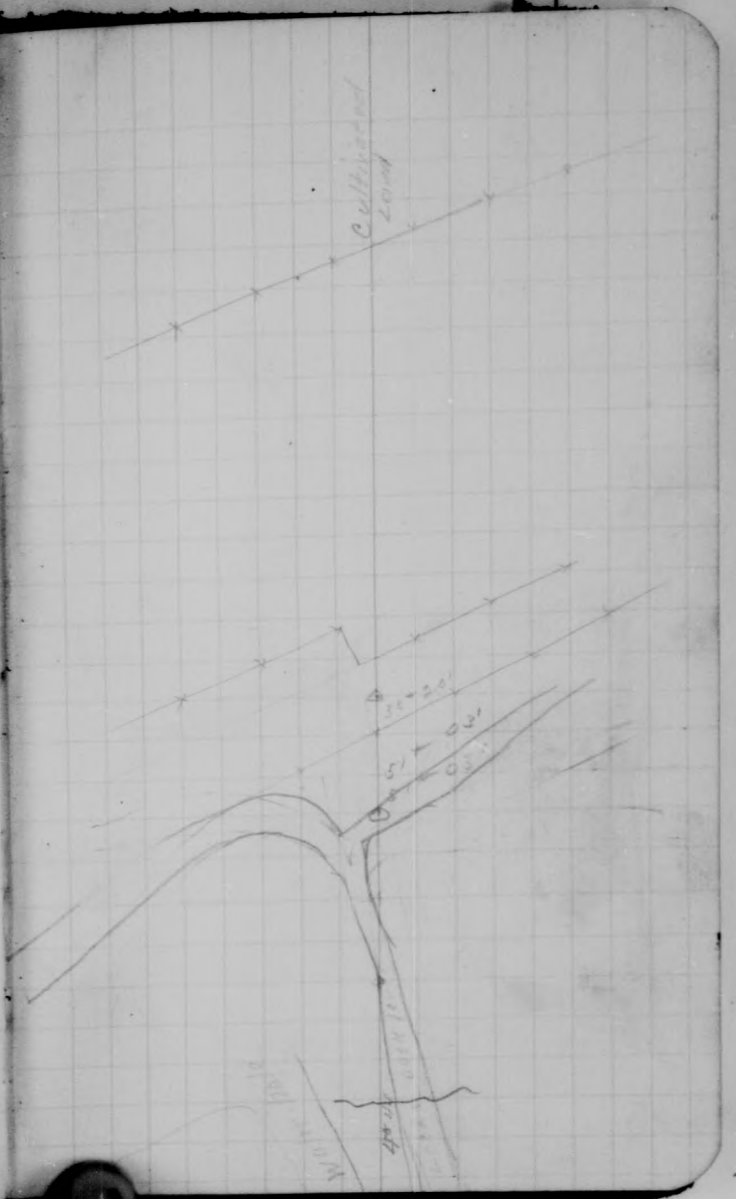
+119

1169

+68

1168

1167



0780

P

1187

1186

+73.4 Δ offset 20' R

+84.5 Edge of bank

+62.5 corner of barn

1185+ C.

+84.4 Δ offset 20' R

+87 Fence

1184

1183

1182

+20.3 Δ offset 20' R

1181

1180

1179

1178

Cultivated land

Δ 20'

Barn

Mrs Price

62.5'

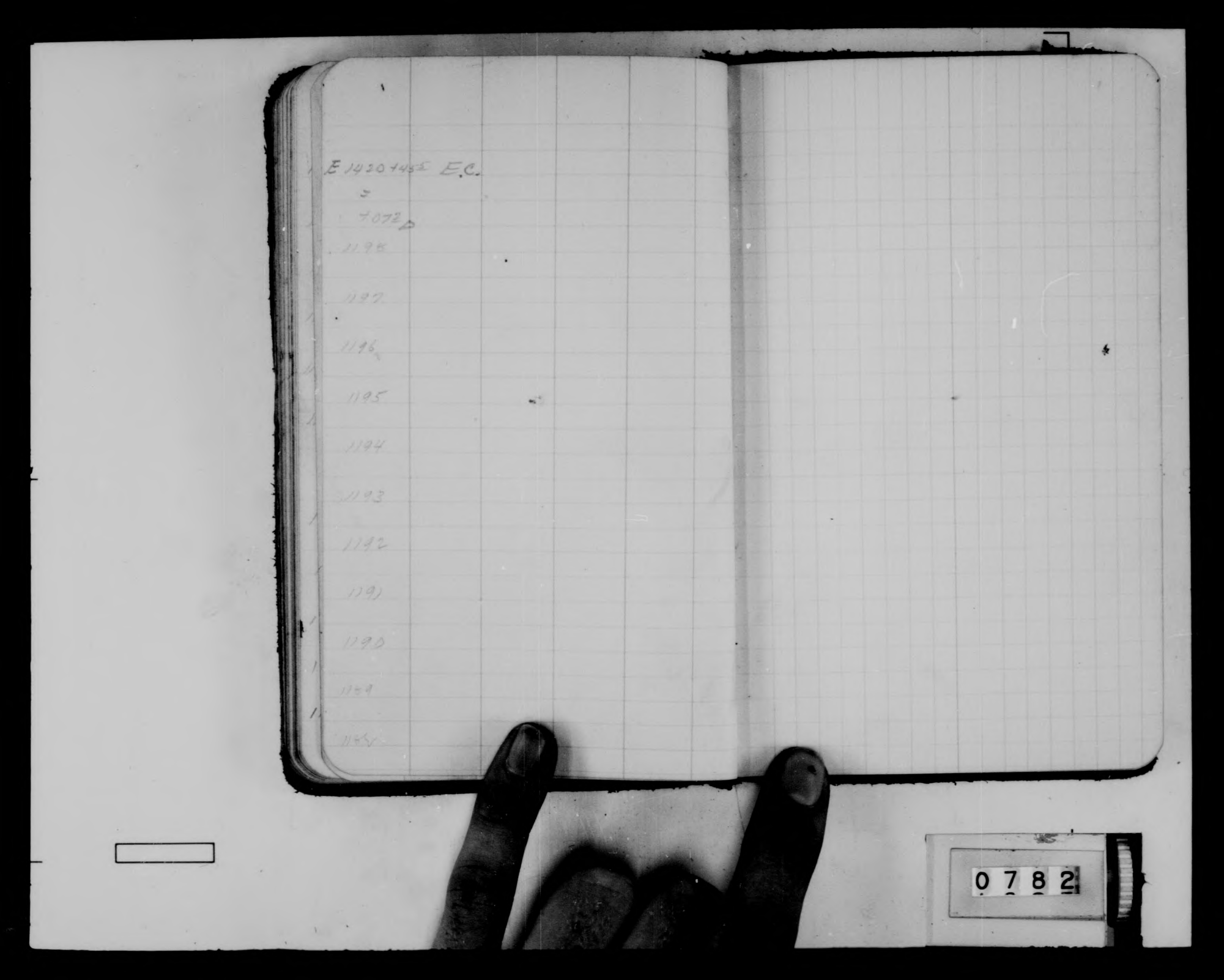
40'

Δ 30'

Δ 30

Cultivated Land

0781


E 1420 1455 E.C.
=
7072
1198
1197
1196
1195
1194
1193
1192
1191
1190
1189
1188
0782

Retracing E line

1453+66 △	offset	68'	L
1452+90 △	offset	68'	L
1450+50 △	"	68'	L
1444 △	Sunk	1'	
1440 △	Sunk	1'	
1433+35 △	2' W. of	worn mile stone	
1431+30 △	Sunk	.5'	

1420+455 △ E.C. Of this point was run on a offset of 20' R

North North 8th

△

△

△

△

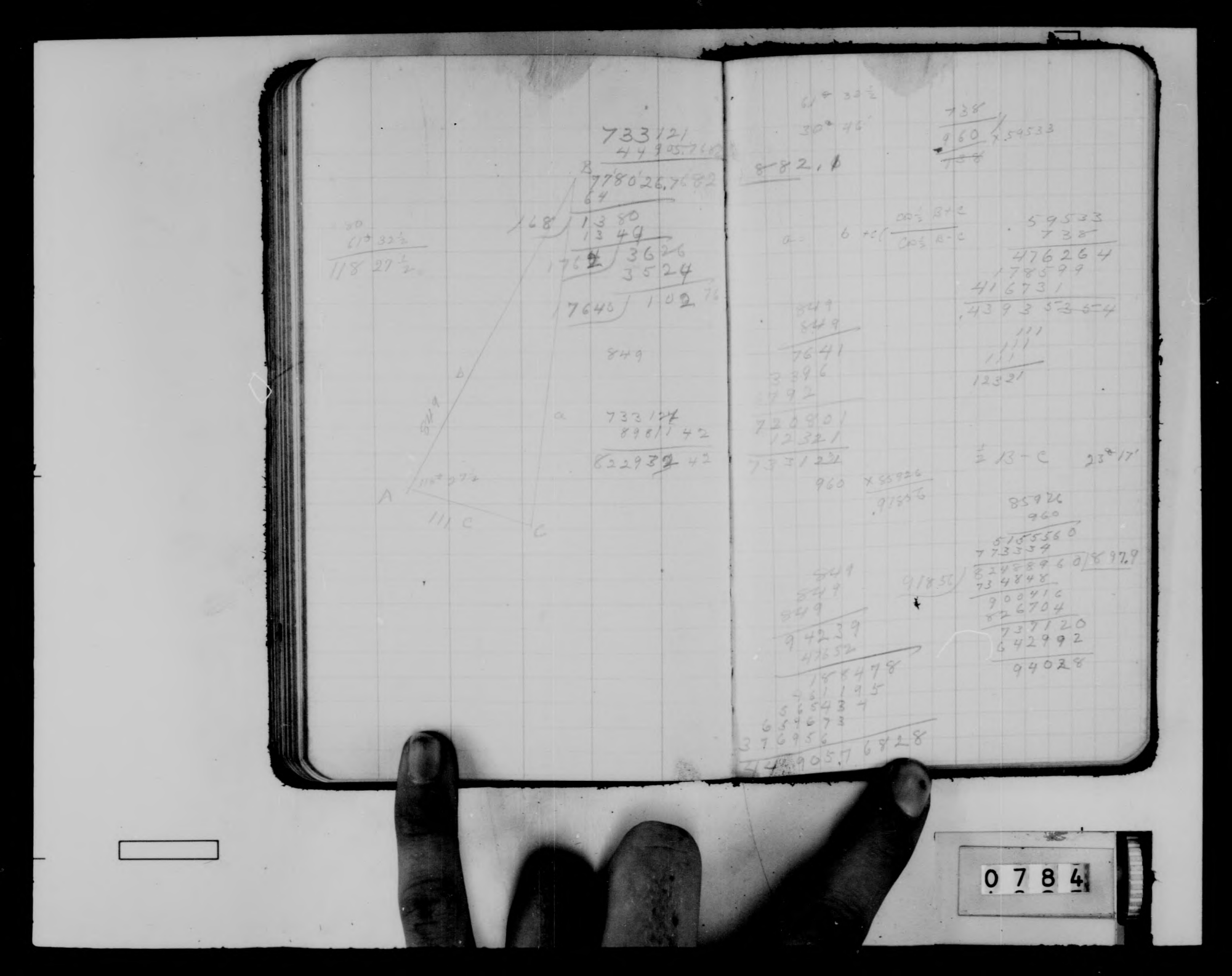
△

△

△

△ in backing up the tangent was made to miss it here

0783


733121
44905.7682
B
7780'26.7682
64
1380
1349
3626
3524
1027682
849
733127
89811 42
622932 42
849
849
76411
3896
792
720910
12321
733123
960 X 55926
91856
A
111 C
C
61° 32½
118 27½
30° 46'
8821.1
738
960 X.59533
595533
738
4762644
1785594
4167731
439357354
111
111
12321
½ B + C
23° 17'
85926
960
5155560
773334
82458960
734848
900412
826704
7371120
6429992
940288
91856
849
849
94239
47652
1484478
461195
5654334
654673
376956
4905.7682

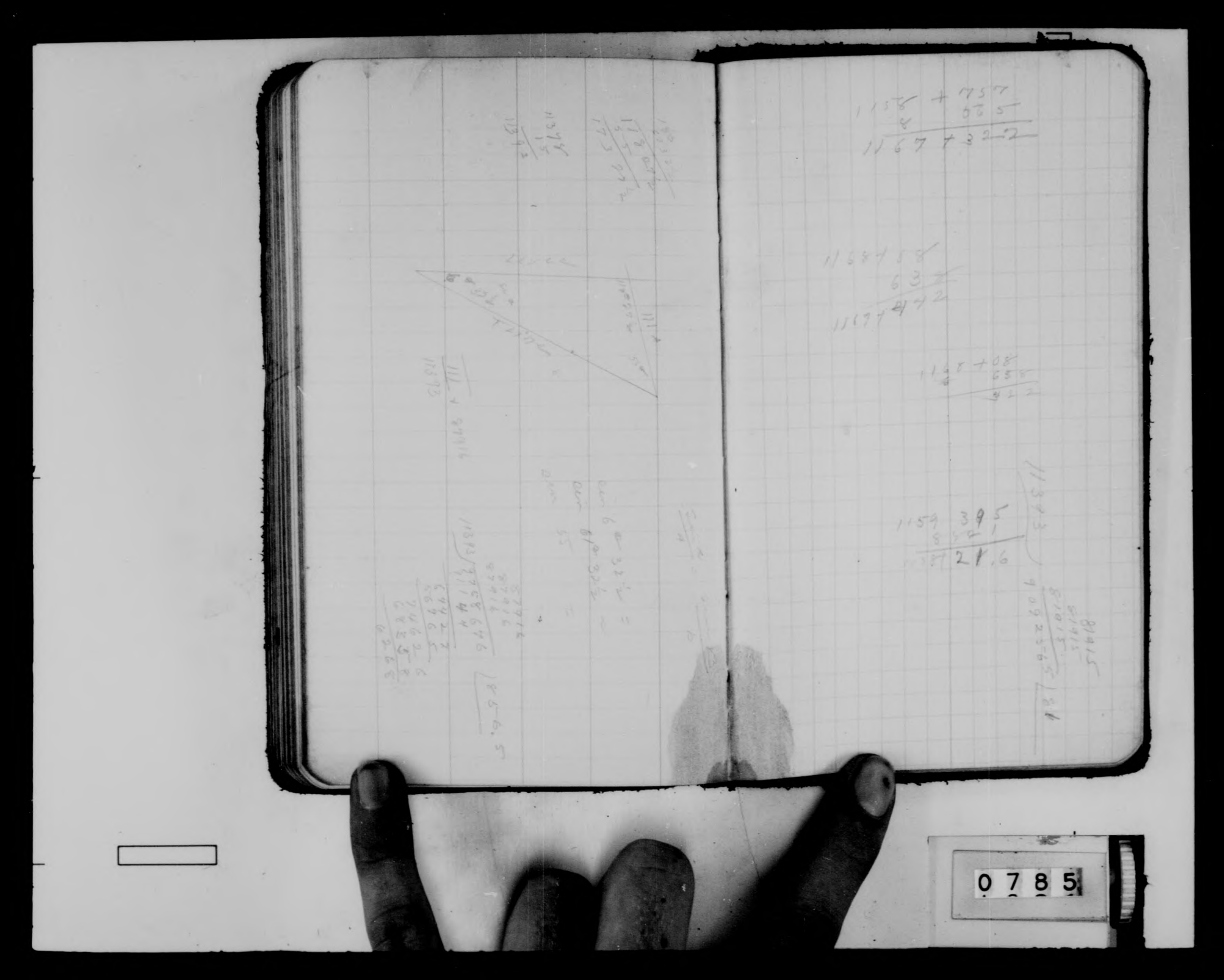

0785

Table IV.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Table V.—Inches in Decimals of a Foot.

1-16 .0052	3-32 .0078	1/8 .0104	3-16 .0156	1/4 .0208	5-16 .0260	3/8 .0313	1/2 .0417	5/8 .0521	3/4 .0625	7/8 .0729

1 .0833	2 .1667	3 .2500	4 .3333	5 .4167	6 .5000	7 .5833	8 .6667	9 .7500	10 .8333	11 .9167

Table VI.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid Ord.	Tan Def.	Chd. Def.	Def for 1 Foot	Deg.	Radius	Mid Ord.	Tan Def.	Chd Def.	Def. for 1 Foot
0° 10′	34377.	.036	.145	.291	0.05′	7°	819.0	1.528	6.105	12.21	2.10′
20	17189.	.073	.291	.582	0.10	20′	781.8	1.600	6.395	12.79	2 20
30	11459.	.109	.436	.873	0.15	30	764.5	1.637	6.540	13.08	2.25
40	8594.4	.145	.582	1.164	0.20	40	747.9	1.673	6.685	13.37	2.30
50	6875.5	.182	.727	1.454	0.25	8	716.8	1 746	6.976	12.95	2.40
1	5729.6	.218	.873	1.745	0.30	20	688.2	1.819	7.266	14.53	2.50
10	4911.2	.255	1.018	2.036	0.35	30	674 7	1 855	7.411	14.82	2.55
20	4297 3	.291	1.164	2.327	0.40	40	661.7	1.892	7.556	15.11	2.60
30	3819.8	.327	1.309	2.618	0.45	9	637.3	1.965	7.846	15.69	2.70
40	3437.9	.364	1.454	2.909	0.50	20	614.6	2 037	8.136	16 27	2.80
50	3125 4	.400	1.600	3.200	0.55	30	603.8	2.074	8.281	16 56	2.85
2	2864 9	.436	1.745	3 490	0.60	40	593.4	2.110	8 426	16 85	2.90
10	2644.6	.473	1.891	3.781	0.65	10	573.7	2 183	8.716	17 43	3.00
20	2455.7	.509	2.036	4.072	0.70	30	546.4	2 292	9.150	18 30	3.15
30	2292.0	.545	2.181	4.363	0.75	11	521.7	2 402	9.585	19.16	3.30
40	2148.8	.582	2.327	4.654	0.80	30	499 1	2 511	10.02	20.04	3.45
50	2022.4	.618	2 472	4.945	0.85	12	478 3	2.620	10.45	20.91	3.60
3	1910.1	.655	2.618	5.235	0 90	30	459 3	2 730	10.89	21 77	3.75
10	1809.6	.691	2.763	5.526	0.95	13	441.7	2 839	11 32	22 64	3.90
20	1719.1	727	2.908	5 817	1.00	30	425.4	2.949	11.75	23.51	4.05
30	1637 3	.764	3.054	6.108	1.05	14	410 3	3.058	12.18	24 37	4 20
40	1562.9	.800	3.199	6.398	1.10	30	396 2	3.168	12 62	25.24	4.35
50	1495.0	.836	3.345	6.689	1.15	15	383 1	3.277	13 05	26.11	4 50
4	1432.7	.873	3.490	6.980	1 20	30	370 8	3.387	13.49	26.97	4 65
10	1375.4	.909	3 635	7.271	1.25	16	359 3	3.496	13.92	27 84	4 80
20	1322.5	.945	3.718	7.561	1.30	30	348.5	3.606	14 35	28 70	4 95
30	1273.6	.982	3 926	7.852	1.35	17	338 3	3 716	14 78	29.56	5 10
40	1228.1	1.018	4.071	8.143	1.40	18	319 6	3.935	15 64	31.29	5.40
50	1185.8	1 055	4.217	8.433	1.45	19	302 9	4.155	16 51	33.01	5 70
5	1146.3	1 091	4 362	8.724	1 50	20	287 9	4.374	17.37	34 73	6 00
10	1109.3	1.127	4.507	9.014	1.55	21	274.4	4.594	18.22	36 44	6 30
20	1074.7	1.164	4.653	9.305	1.60	22	262 0	4.814	19 08	38.16	6 60
30	1042 1	1 200	4.798	9.596	1 65	23	250 8	5 035	19.94	39 87	6 90
40	1011.5	1.237	4 943	9.886	1 70	24	240 5	5.255	20 79	41 58	7.20
50	982.6	1.273	5 088	10.18	1.75	25	231 0	5.476	21 64	43.28	7.50
6	955.4	1 309	5.234	10.47	1.80	26	222.3	5.697	22 50	44.99	7.80
10	929.6	1.346	5.379	10.76	1.85	27	214.2	5.918	23.35	46 69	8 10
20	905.1	1 382	5 524	11 05	1 90	28	206 7	6.139	24 19	48 38	8 40
30	881.9	1.418	5.669	11.34	1 95	29	199 7	6 360	25.04	50.07	8 70
40	859.9	1 455	5.814	11.63	2.00	30	193 2	6.583	25.88	51 78	9 00

0786